

Claims

1. A method for managing radio resources in a radio system, the radio resources being used for providing a radio connection between user equipment and a radio cell of a base station in a radio network of the radio system, the method comprising:
- 5 receiving (402) radio capacity information on the radio cell,
receiving (404) transport capacity information on a transport network, the transport network being used for connecting the base stations of the radio network to a core network,
10 characterized by
determining (406) a transport capacity limit for the radio cell based on the transport capacity information;
signalling (408) the transport capacity limit of the radio cell to the base station;
15 adjusting (410), in the base station, the radio capacity information based on the transport capacity limit;
signalling (412) from the base station the adjusted radio capacity information on the radio cell;
managing (414) radio resources of the radio network by using the
20 signalled adjusted radio capacity information on the radio cell.
2. The method of claim 1, wherein available radio capacity of the radio cell is adjusted based on the received transport capacity limit.
3. The method of claim 1, wherein the radio capacity information indicates the current cell load and the maximum radio capacity of the radio cell.
- 25 4. The method of claim 1, wherein the radio capacity information indicates the current cell load and the available radio capacity of the radio cell.
5. The method of claim 1, wherein the transport capacity information indicates the transport load of the transport network.
6. The method of claim 1, wherein the transport capacity information
30 indicates the transport load of a connection from one base station of the radio network to another base station of the radio network.
7. The method of claim 1, wherein the adjusted radio capacity information on the radio cell is signalled from the base station to a radio resource management unit to be used in managing radio resources.

8. The method of claim 1, wherein the adjusted radio capacity information on the radio cell is signalled from the base station to a Common Radio Resource Management Server to be used in managing radio resources.

9. The method of claim 1, wherein the transport capacity limit of a
5 radio cell is determined in a transport resource management unit.

10. The method of claim 1, wherein the transport capacity limit of a radio cell is determined in an Internet Protocol Transport Resource Manager.

11. The method of claim 1, wherein a handover list is organized based on the adjusted radio capacity information on the radio cell.

10 12. The method of claim 1, wherein the adjusted radio capacity information on the radio cell is used when handling base station admission requests.

13. The method of claim 1, wherein the adjusted radio capacity information on the radio cell is used when handling handover requests.

15 14. A radio system, comprising:

at least one radio network (324), the radio network (324) comprising at least one base station (326) for providing user equipment (370) with a radio cell (124, 125, 128, 129) for radio transmission and reception;

20 a transport network (322) for providing the base stations of the radio network with a connection to a core network (100) of the radio system;

a radio resource management unit (301) for managing the radio resources between the base stations (326, 328) and the user equipment (370) in the radio network (324), configured to receive radio capacity information on the radio cell (124, 125, 128, 129);

25 a transport resource management unit (300) for managing the transport network resources, configured to receive transport capacity information on the transport network (322);

characterized in that

30 the transport resource management unit (300) is configured to determine a transport capacity limit for a radio cell based on the transport capacity information;

the transport resource management unit (300) is configured to signal the transport capacity limit of the radio cell to the base station (326);

35 the base station (326) is configured to adjust the radio capacity information on the radio cell based on the transport capacity limit;

the base station (326) is configured to signal the adjusted radio capacity information on the radio cell to the radio resource management unit (301) to be used in managing radio resources,

the radio resource management unit (301) is configured to manage
5 radio resources of the radio network (324) by using the signalled adjusted radio capacity information on the radio cell.

15. The system of claim 14, wherein available radio capacity of the radio cell is adjusted based on the received transport capacity limit.

16. The system of claim 14, wherein the radio capacity information
10 indicates the current cell load and the maximum radio capacity of the radio cell (124, 125, 128, 129).

17. The system of claim 14, wherein the radio capacity information indicates the current cell load and the available radio capacity of the radio cell (124, 125, 128, 129).

15 18. The system of claim 14, wherein the transport capacity information indicates the transport load of the transport network (322).

19. The system of claim 14, wherein the transport capacity information indicates the transport load of a connection from one base station (326) of the radio network to another base station (328) of the radio network (324).

20 20. The system of claim 14, wherein the adjusted radio capacity information on the radio cell is signalled from the base station (326) to a Common Radio Resource Management Server (301) to be used in managing radio resources.

21. The system of claim 14, wherein the transport capacity limit of a
25 radio cell is determined in an Internet Protocol Transport Resource Manager (300).

22. The system of claim 14, wherein a handover list is organized based on the adjusted radio capacity information on the radio cell (124, 125, 128, 129).

30 23. The system of claim 14, wherein the adjusted radio capacity information on the radio cell (124, 125, 128, 129) is used when handling base station admission requests.

24. The system of claim 14, wherein the adjusted radio capacity information on the radio cell (124, 125, 128, 129) is used when handling hand-
35 over requests.

25. The system of claim 14, wherein the base station (326) is configured to adjust the available radio capacity of the radio cell based on the transport capacity limit.

26. The system of claim 14, wherein the transport resource management unit (300) is an Internet Protocol Transport Resource Manager.

27. The system of claim 14, wherein the radio resource management unit (301) is a Common Radio Resources Management Server.

28. The system of claim 14, wherein the radio resource management unit (301) is configured to organize a handover list based on the adjusted radio capacity information on the radio cell.